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BULBS FOR FALL PLANTING

A CATALOG OF

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AUG 14 1943 ★
U. S. Department of Agriculture

The Amaryllis, Iris, Lily, Orchid and Other Plant Families.

Special Articles: "How Are Your Points?", a personal letter to you; How to Grow Amaryllis; Culture Directions for All Bulbs; Bulbs for Winter Window Gardens; Soils, Fertilizers, etc.

FALL 1943

CECIL HOUDYSHE

1412 THIRD ST.

LA VERNE, CALIFORNIA



Division of Fruit & Veg.
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U. S. Dept. of Agriculture
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HAEMANTHUS KATHERINAE



GLORIOSA ROTHSCILDIANA

Two rare and beautiful bulbs listed in
Spring 1944 Catalog

HOW ARE YOUR POINTS?

Dear Floral Friends:

Altho the measure into which Father Time pours the days, hours or minutes allotted to each task, is always too small and is already used up for the preparation of this catalog, I would not miss including at least a brief friendly letter and the inquiry in the above caption. Perhaps the inquiry is the appropriate equivalent of, "How do you do?"

No doubt most of you have done as well as we have. Rationing has produced a few inconveniences but we have had plenty. In a world employed in the manufacture of the destructive instruments of war and in their use, in which multitudes have died from starvation and entire nations have been ravaged and few are sufficiently clothed, America has not only produced more ships, planes and munitions than other nations but has also fed and clothed us and helped to feed and clothe our Allies.

The Houdyshels have enough to eat and wear. We even have enough sugar, coffee, shoes and meat, altho we have had to substitute fried chicken for beefsteak! Let's ask the Greeks and the Dutch for a little sympathy re the fried chicken substitution for beef!

We Americans are doing so well that we do not appreciate what we have. We have so much food, are so well clothed and protected and are so comfortable every way that we are full of surplus energy. Many find an escape valve necessary, in which to blow off this excess energy by figuring out just how the country should be run and the war conducted, where our leaders have made their mistakes and in telling everybody about it.

I only wish to inquire if this energy might not better be expended in a garden raising fruits, vegetables and flowers and in raising a few chickens and rabbits? Or in some kind of war work?

I suggest that we analyze our own actions and make a personal inventory of them as they

THE HERBERT MEDAL

affect our country's war effort. Don't doubt that the Axis has an accurate cross-sectional view of our reaction toward the war. They know about our labor troubles, our falling off in construction of vital materials, strikes, absenteeism, our mistakes, overconfidence and complacency, shameful quarrels of high officials, and even the things talked about among the people. The Axis has found much to encourage them and thus prolong the war. We pay in the lives of our soldiers.

Such an inventory will likely reveal to most of us a few things we can well reject, among them party prejudice. Party affiliation is 99% traditional. Many accept, in their processes of reasoning, this as their major premise: "My party is always right." They are unconcious of this and do not realize that they thus allow their party leaders to do their thinking. Any prejudice whatever weakens our logic.

Most political haranguing is inane and especially so when directed against fellow party members who cooperate with the "opposition" in conduct of the war. Our party system is useful in deciding peace time problems. In war, Victory should have no impediments.

This letter is addressed to flower lovers. We are agreed upon the importance

of flowers in our own lives and are probably eager to bring the influence of flowers into other lives. We must have enough for ourselves and should have them to give away: To the sick friends, those bereaved by war, the U. S. O., soldier's hospitals, churches and wherever their message will give courage or cheer.

We are doing our best to supply you with bulbs at non-inflationary prices. It is not too easy on account of the shortage of labor. Right now we could use two good men. One might do. We could use a good office assistant to pack bulbs, etc. Come over and help us if you like this work.

You must not expect us to write letters unless unavoidable. Our office force must be used to fill orders. We will be as prompt as possible and you will at least get your bulbs before time to plant. We do not anticipate serious delays. Cooperate with us and be patient if necessary and we will serve you well.

One of the best ways to bring the influence of flowers into other's lives is to call the attention of your friends to our helpful catalog. May you have a nice garden yourself.

Yours for Victory,

CECIL HOUDYSHEL

TERMS AND INSTRUCTIONS FOR ORDERING

Read the following carefully. It will avoid delay or misunderstanding

Sales Tax. California customers must add 2½% for state sales tax.

Order Early. Late planting results in less satisfaction with most bulbs.

Remit with order by check or M. O. Currency or coins are acceptable but we are not responsible if lost. Stamps reluctantly accepted at 8% discount.

C.O.D. Please do not order C.O.D.

Postage prepaid on orders of \$1.00 or over. Under \$1.00, add 10c for postage and wrapping. Insurance 5c extra, for orders up to \$5.00. 10c for orders \$5.00 to \$25.00.

Prices given are for one bulb unless otherwise stated. A dozen costs ten times the price of one. Six bulbs are sold at the dozen rate. If not otherwise priced, 100 bulbs are sold for the price of 7 doz., or 70 times the cost of one. Not less than 100 are sold at 100 rate. 50 are sold for the price of 4 doz.

Wholesale. Dealers send for our **Wholesale Bulletin**. Use your business stationery or otherwise identify yourself as a bonafide dealer.

Garden Clubs, who pool their orders for collective buying in quantity, send for our **Garden Club Bulletin**. We give you wholesale prices and discounts on a "Transportation prepaid" basis. This **Garden Club Bulletin** is available only to the official **Purchasing Agent** of actually organized **Garden Clubs** but not to individuals, even though **Garden Club** members.

Foreign Orders. Postage is prepaid if no greater than to our 8th zone. Best to remit a little extra. If too much, we send extra bulbs.

Errors. Our packers make a few, not many. We want to correct them. Notify us at once in case of shortage or error. **Unpack** your order as soon as received. Don't wait two weeks, then tell us the bulbs were mouldy.

Substitution. If out of a variety, we usually substitute one as near like it as possible, as good or better and of equal or greater value. If you do not approve this, say, "no substitution."

Guarantee. Our bulbs are true to name, and healthy. We do not, however, accept any responsibility for their performance since we cannot control the conditions of their growth. If, in your opinion, our bulbs are not up to our specifications, please notify us at once when you receive them. But do not return them until we explain, unless you are sure they are damaged or faulty. Customers sometimes err in judgement and one returned dwarf *Baby Callas* because they were

small. Another returned *Ranunculus* because they were too dry and dead looking.

Culture directions are not sent with bulbs as all necessary information is given in this catalog.

Catalogs. Spring Catalog is mailed Jan. 15. Fall Catalog Aug. 15. **Iris Price List**, sent on request only, at any time. If no orders are received for two years, names are dropped from our mailing list. We are dropping 10,000 names this Fall, as we wish to conserve labor, paper and expense. If you are no longer interested in bulbs, permanently or temporarily, please ask your Postmaster to return this catalog at our expense.

Correspondence. Our office assistants marry soldiers or get jobs as welders or riveters too soon after we have trained them. We have to compete with the Army even for a maid. Frankly, we can't write many letters as we need our office force to put up orders.

If information is needed, seek for it first in the catalog. Nearly always, it is there. Order only from the current catalog. If the bulb is not listed we do not have it for sale. I like to help with your problems but make it easy and give full particulars. Enclose a self addressed post card or if a longer reply is necessary, make out a list on which I can write yes or no, and send self addressed, stamped envelope.

Recently, I've had to write many letters by hand. As a result I have a sprained wrist and have to wear a leather strap around it when writing. I've also developed writers cramp in my hand, arthritis in my elbow and neuritis in my shoulder. But I'll still try to help, and certainly want you to report on your results, even though I may not answer.

Identifying Bulbs. We can usually identify your unknown bulbs. The service is gratis. Sometimes we can do this from the flowers and foliage, tho it is better to include a bulb and to give the case history and all known facts. In some cases we must grow a bulb a year to determine it. Then we inform you. We cannot undertake to identify horticultural varieties of *Iris*, *Gladiolus*, etc. Enclose addressed post card for reply.

Time of delivery. If it is the correct time to move the bulbs ordered we send them promptly. If some of them must be shipped at a future date when the bulbs are dormant, we acknowledge the order and state when delivery may be expected. When you order and get neither bulbs nor acknowledgement, do not wait months before reporting it. Your order, the bulbs or our acknowledgement may have gone astray. Three weeks should give results even in our busiest seasons, and considering present slow mails.

GENERAL CULTURE DIRECTIONS

The best bulb soil is a rich sandy loam. Only a few, like Bearded *Iris*, prefer heavy soil. But nearly all bulbs do well in heavy soil, especially if plenty of humus is added.

All soils require the addition of large amounts of humus. You should compost all weeds, leaves and small branches. If possible, add manure to this and when well rotted and fine turn under and thoroly mix with the soil.

Fertilizers. Animal manures are the best. Use them with compost as explained. Do not use fresh manure except as a light mulch for certain growing plants and experiment on a few first as too much quickly destroys a plant. Do not add fresh manure or commercial fertilizer to soil just before planting bulbs or seed. It would be as logical to give a day-old baby a tough steak, a piece of apple pie and two cups of coffee. Fertilize only healthy, thrifty plants. What would you think of a doctor who ordered a big meal for a sick man as a means of recovery?

Questions we are asked: May I cut off the tops of *Daffodils* (or *Gladiolus*, etc.) after they have flowered? How shall I treat my *Amaryllis*, *Clivia*, *Calla* or other bulbs after flowering?

The answers are logically determined by considering the life cycle of a bulbous plant.

A dormant bulb contains a bud. If it is a spring bloomer this is a flower bud. There is also much stored up food. This food is used in developing the roots, the perfection of the flowers and the first growth of foliage. By the time the bulb is through flowering it has become much smaller and is soft because this stored up food has been used up. By that time the roots and foliage are sufficiently developed to begin the process of rebuilding the bulb, making it ready for the following season. If well cared for until its next dormant period the bulb will become larger than before, produce offsets, sometimes also seed. But this period of growth after flowering is absolutely essential to the future functioning of the bulb. Water and cultivate as long as the tops are green.

Depth and Spacing often cause too much concern. Bulbs usually have sufficient adaptability to do well under widely varying conditions. In a general way, bulbs should be about two or three times their diameter apart. Small bulbs like *Ranunculus* No. 3 may be covered 1"; bulbs the size of a *Daffodil* covered 4" to 6". Bulbs with a heavy top need deeper planting to maintain an erect position. Planting in light sandy soils should be deeper than in heavy soils. In very cold climates, deep planting protects bulbs from damage from frost. Few bulbs are too finicky about their depth and many of them have the ability to correctly adjust themselves to the most favorable depth if left in one place a few years.

Alibis. Many amateur growers refuse to accept responsibility for their failures when they result. They blame the bulbs, but not themselves, the weather, their soil or pests. Therefore they do not learn from the best teacher—experience. Luther Burbank said, "A failure is an accomplishment." It is, if you learned by it.

ACID AND ALKALINE SOILS

Most plants thrive in neutral, mildly acid or mildly alkaline soils equally well as they have a wide range of adaptability. But a few require alkaline soils and some will thrive only in distinctly acid soils. In the latter class are included *Rhododendrons*, *Callas* and most shade loving plants.

The acid-alkali balance is expressed in pH units. pH 7 is neutral. Below that the acidity increases, above it the alkalinity increases.

Solitex Outfit. This little testing kit will enable you to determine the pH of your soil. No chemical knowledge is required. Directions for use are included with lists of plants and their preferred pH. Price is \$1.00.

If soils are too alkaline or if plants to be grown in them require more acidity the best remedy is to incorporate much humus. Peat is most acid usually, though some American peat has become alkaline. Oak leaf mould is more acid than other leaf moulds. Use much leaf mould or peat (preferably imported) for *Glad-iolus*, *Callas*, *Arums*, *Lilies*, *Haemanthus*, *Nerines* and all plants that require acid soil.

Rootone. We know of really remarkable results from the use of Rootone, a plant hormone powder that induces quicker rooting of cuttings and bulbs and sprouting of seed. As a result of its action, bulbs make a more vigorous root system quickly and thus the flowers are earlier and larger; the foliage stronger and when dormant the bulbs will be found to be larger and with greater increase in number. We suggest you just touch the base of a bulb to the powder until covered by a thin film. Or you can apply it with a soft brush or from a salt shaker after bulbs are set. Dip the end of cuttings into the powder. Tumble the seeds in a jar or in the seed envelope with the powder. When seeds are coated, roll them out and save remaining powder. Treat your victory garden seed. Rootone will treat from 60 to 300 times its weight of seed and thousands of times its weight of bulbs.

We especially advise its use with spring planted *Amaryllis* bulbs as at this time the roots are likely to be absent or mostly dried up. Sometimes they do not root easily if not expertly handled.

Price. One-half ounce is a good supply. Mailed, postpaid for 50c. Use directions above. We can supply in 1 lb. cans (for extensive plantings) at \$5.00., f.o.b. La Verne or postpaid for \$5.35.

Vitamin B-1 is a useful stimulant for plants, we believe. We have soaked the roots of *Amaryllis* in flower, when transplanting, in the solution and the flower was uninjured, lasted for days and seed were ripened. We have used it successfully with other plants in transplanting. **Price.** Bottle of 100 tablets, 75c.

Directions for use, applying only to our own tablets. In transplanting bulbs or any plants, loose roots, dissolve 5 tablets in 1 gal. water. Soak roots in this 15 to 30 min. Pour solution around plant when set.

To stimulate growing plants, for the first application dissolve 1 tab. in 2 gal. water. For succeeding waterings, use 1 tab. to 4 gal. of water once a week.

Warning. Do not soak dormant bulbs in vit. B-1. It rots them.

BULBS FOR WINTER WINDOW GARDENS

Perhaps the most desirable and most popular bulb for growing in pots is the *Amaryllis*. If potted in Dec. they sometimes bloom before Feb. 1. Others come along later up to May 1. Grandma's favorite, *Amaryllis Johnsonii* is still a cheerful red flower in late winter. Any of our named varieties or the hybrids will give great satisfaction.

Clivias are rare but now priced within the reach of all. Give *Amarcrinum*s a large pot. They flower several times a year. *Cyrtanthus*, flower in winter. *Haemanthus Katherineae*, *H. multiflorus* and *H. puniceus* must be grown in pots in north and flower late spring to June. *Hymenocallis*, *Species No. 1* and *No. 2*, are Spider Lilies of delicate beauty that force easily in not too large pots. *Nerine filifolia* and *N. rosea crispata*. (Oct. to Dec.) *N. fothergilli*, (Oct. Nov.) *N. Bowdenii*, (early winter.) *Sprekelia formosissima*. Our evergreen type is one of the most satisfactory pot plants which blooms now and then thru the year. We always have winter flowers. *Tulbaghia violacea*. I believe I have never seen them when not showing flowers. All *Daffodils* and *Narcissus* but we especially recommend *Soliel d'Or*, (Dec-Jan.) and *Poetaz Hybrids*. *Freesias*, (Feb.) *Sparaxis*, *Tritonia*, *Babiana*, *Baby Glads* (all Feb. or later) *Marica*, (late winter) *Moraea*, (late winter to spring) *Colchium*, (Aug. Sept.) *Grape Hyacinths*. (Late winter.) All *Scillas* will flower in pots but the tender *S. peruviana* is especially recommended. (Late winter.) *Ornithogalum arabicum* will flower about Easter and is taking the place of Easter Lilies that are hard to get at present. *Lachenalias*, (Dec. 15 to late Feb.) all varieties. *Veltheimia* An exceptional pot plant and flower. (Dec. 15 to Mar.) *Oxalis*, all winter growing sorts. Very bright and cheerful. Begin to flower early and continue long. *Callas*. White and Colored flower well in pots. Do not pot colored *Callas* before Dec. 15. White *Callas* may be started much earlier, as they have been dormant all summer.

Billbergias are fine pot plants. Do not over water in winter until they start but do not allow to dry out either. *B. nutans* blooms first, about Jan.—Feb. It is a gorgeous flower. Other varieties later. Many have rich mottled foliage. *Violets* The new violet *Royal Robe* flowers well in winter in pots in a cool room. Many others can be flowered in pots. We have mentioned only those we could recommend most highly.

ARRANGEMENT OF CATALOG

It is by Plant Families instead of alphabetically. Thus one can see the relationship of the plants, though a little more study may be required to find a desired listing. We try to make our catalogs interesting and useful with descriptions and culture directions. If your growing method gives complete success, do not change. Save every one of our catalogs for your Garden Library.

THE AMARYLLIS FAMILY - - - Amaryllidaceae

This family includes the bulbs from *Agapanthus* and thru *The Alliae*.

The **American Amaryllis Society** is an association of those throughout the world who grow *Amaryllids* as an interesting and intellectual hobby. An annual book "*Herbertia*" of about 250 pages is sent to each member. Therein is discussed

the best culture methods; descriptions of new species; notes on *Amaryllis* in their habitat; reports on experiments in crossing, in culture, propagation, etc. *Herbertia* is the essential book of reference on *Amaryllids*. Beautifully illustrated. I invite you to send me \$2.00 for membership. You will receive the 1943, vol. 10, *Herbertia* before the end of this year. Vol. 9, (1942) is most interesting and varied. Price \$3.25.

Those who desire to specialize in bulbs of this family would find the complete set of nine volumes a valuable possession. Price \$26.00. Or with vol. 10, when issued, \$28.00. The supply of the early volumes is almost exhausted. To get a complete set, one must order soon.

How To Grow Amaryllis. This discussion includes not only the Genus *Hippeastrum*, which recently botanists have changed to the old popular name of *Amaryllis*, but will include the entire family of *Amaryllids*.

Certain members of this family bloom early in the fall. It is really better to order them in the spring. But if ordered in Aug. we can usually get them to you before they flower. But hurry, order today. These are *Amaryllis belladonna*, *Hippeastrum advenum*, all *Lycoris* species, *Nerines*, *Sternbergia lutea* and *Haemanthus coccineus*.



SELECT STRAINS HIPPEASTRUM

Hardiness. Most *Amaryllids* listed are hardy in the deep south. *Amaryllis belladonna*, *Amacrinum*, *Agapanthus*, *Cooperia*, *Crinums*, *Habranthus*, *Hymenocallis*, *Lycoris*, *Pancratiums*, *Sprekelia*, *Sternbergia* and *Zephyranthes* are hardy on the coasts to North Carolina and to Vancouver. Inland, most of them have been grown with protection at Washington, D. C., parts of Arkansas and the middle south. In this border line, plant deeper and in a protected location like the south side of house or wall. Mulch well in winter or cover with cold frame. *Hippeastrums* (*Amaryllis*) are unlikely to survive in the outside garden at temperatures below 20°, however, an Oklahoma customer reports that she has grown them for years by planting deep. She covers with 4" of soil above top of bulbs, in a well drained, protected situation. In the winter the bulbs are further protected from freezing by a mulch of leaves and branches. Altho the winter temperatures approach zero, the bulbs survive. They would survive, if not frozen. But the bulbs should be established and well rooted by a seasons growth. To do that, pot the bulbs in the fall and shift in the spring to outside garden. Try a hardy sort first like *A. Johnsonii* or our 50c hybrids.

Winter hardy in the north are *Crinum longifolia*, *Lycoris squamigera*, *L. incarnata*, and *Leucojums*. Only slightly less hardy are *Crinums moorei*, *Cecil Houdyshel* and *Powellii*. In milder sections, plant deep and mulch well with brush.

Most *Amaryllids* are gross feeders. Properly used, animal manures are best.

Amaryllis (or Hippeastrum) Hybrids

When bulbs are received, pot at once. Be ready with soil and pots in advance. If received in the fall, many living roots will be attached, and often a few

even in late winter. Remove only dead roots and ends and carefully spread out all live roots when potting. Even if no roots remain, they will grow and flower tho foliage may be produced later.



HIPPEASTRUM AMBIGUUM HYBRID

period of growth is necessary to fill them out and increase their size. If good growth is made at this important stage the bulb will be much larger then in the preceeding year and offsets may be made. It is necessary to keep them growing for as long as possible. When the weather is warm outside the pots may be plunged in the garden or the bulbs with entire, unbroken clump of roots and earth may be removed from pot and reset. Bulbs may be planted in full sun, but slight shade is good where very hot summers prevail. When bulbs are well established give liberal mulchings of dairy manure. Use stable manure carefully. It is good but very strong. Before heavy frost remove to house. Allow them a rest for several weeks but do not allow pots to dry out completely. The temperature of 45° check growth. When you want them to start, bring to 60° and water a little. You can become expert in obtaining flowers every year. In the garden plant *Amaryllis* just under the soil surface.

Other Amaryllids. Further culture advice is given, where necessary, with the descriptions.

List of Amaryllids

Agapanthus. Blue Lily of the Nile. The name means Love Flower. Blooms in late spring and summer. Large, most attractive flower umbels on tall, erect, stems. Universal favorites in south and easily grown in north in tubs or buckets, wintered in basement. Half shade to full sun.

Agapanthus Africanus, var. Mooreanus minor. A dwarf form especially suited to pot culture. Lovely blue umbels on 18" stem. Likes good garden loam, partial shade. Deciduous, but should not be entirely dry over winter. 35c ea. 4 bulbs for a 6" pot, \$1.25.

Spring potted bulbs will root much more quickly and easily if the base of the bulb is dusted with Rootone. (Send 50c for ½ oz.)

A bulb under 3" diam. needs a 6" pot. Larger bulbs should have a 7" to 8" pot in proportion to the size.

The best potting soil is a friable loam. To this add an equal volume of the following mixture composed of equal parts of sand, well rotted cow manure and rotted leaf mould. Bone meal is recommended, 1 tablespoonful to each pot. Mix all thoroly.

Pot the bulb with neck and upper bulb surface exposed. Water well but after that keep the soil only slightly moist until growth starts, then gradually increase. When first potted set the bulbs in a cool, light room. The best temperature now is 45° or 50°. Later the pots may be removed to a room of about 60°, 70° or 80° will force more rapid growth and earlier flowers and this is all right if the bulb is well rooted. Buds will usually have shown.

After flowering, the bulbs will be shrunken and perhaps soft. A

A. longispathus. New species. Flowers resemble *Orientalis* but blooms more profusely and is more graceful. 75c ea. 3 for \$2.00.

A. orientalis (umbellatus.) Our variety is an especially fine one with deep blue flowers on a tall stem. Many flowers are produced in the spring and thru summer. 50c. Extra large roots, 75c. We have a light blue variety for \$1.00 ea.

A. orientalis alba. A pure white variety. Rare. \$1.00 ea.

A. pendulus. Entirely new and distinctly different species of greatest value. Flowers in shades of blue and purple in a great variety. Flowers long, tubular and pendulous when open. The umbel is smaller but most graceful. Like "*mooreanus minor*" it is deciduous and can only be delivered between Nov. and Mar. Price \$1.50 ea.

Alstroemeria. Alstroemerias are very showy plants with long slender stems. As a cut flower they last a long time, are very beautiful and are distinctly different from the more common flowers. The individual flowers much resemble a highly colored small orchid. The flowers are in a large umbel on a long stem.

Culture. They should have about 50% shade. The soil should be a rich sandy loam with good drainage and a great deal of humus. This may be had from old rotted screened manure or leaf mould. Plant the cluster of tubers in the south from Sept. to Nov., with the crown 2" under the soil surface. When tops die after flowering withhold water or dig and keep dry. It is better not to disturb them. In the south they start to grow in the fall and will require irrigation before rains come.

They must have an abundance of water at all times when growing and good drainage. They are hardy as far north as Washington, D. C., and we have them reported hardy in a well protected situation, with winter mulch in New Jersey and Ohio. In the north they can be planted in the spring. Carefully lift in the fall and store in dry peat or sand, and keep very cool. They may also be grown in large pots. Please order early in fall, as it is hard to hold them back in this warm climate.

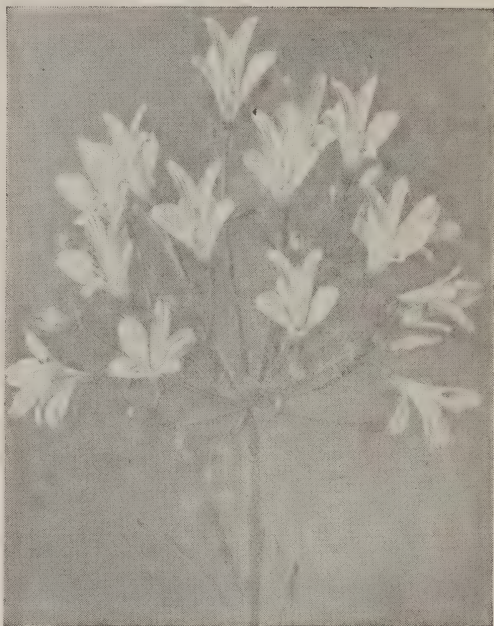
Alstroemeria aurantiaca lutea. Bright yellow flowers. A strong grower and blooms a long time. Flowers fine for cutting. 20c. Per doz \$1.75 Per 100, \$12.00.

A. chilensis. Extremely attractive flowers in a wide range of color from nearly white to various pink, red, yellow and orange tones. One of the best and easiest to grow. Assorted colors only. 15c. ea. Per doz., \$1.25. Per 100, \$10.00.

A. pulchella. Large clusters of dark red flowers tipped green and brown spots inside. Tall long stems. Early flowering. 15c. Per doz., \$1.35.

A. assorted varieties. This lot contains only excellent sorts, strays, lost labels etc. 6 for 65c. Per doz. \$1.00

Amarcrinum Howardii. A cross between *Crinum moorei* and *Amaryllis belladonna*. A delicate pure pink color. Increases wonderfully fast and blooms in all seasons even midwinter here. \$1.50 ea.



ALSTROEMERIA

Amaryllis belladonna. Botanists have recently changed its name to **Callicore rosea**. It has many common names—**Surprise Lily**, **Naked Lady Lily**, or better **Lady Godiva Lily** are descriptive of the fact that the flower stem shoots up, bursts into full bloom in only a few days—and is unclothed by any leaves. The soft pink flowers in large umbels are of exquisite beauty and spicy, intriguing fragrance. Valuable for cutting.

Culture. It is best to transplant in July but we have bulbs dug before blooming that can be held back until (possibly) Sept 10. Order at once. Late orders will be filled with bulbs that have bloomed as they can be moved until foliage has begun to show. In the south plant in garden with top of bulbs a little below surface. *Amaryllis* are very hardy for this class and will recover easily from 12° of frost. They may be grown as far north as Washington, D.C. or Vancouver, B.C.

They are not very successful as pot plants but will bloom the first year and one flower stalk is well worth the cost of the bulb.

A. belladonna major. Earliest and largest. Pure pink. 35c. Large, 50c Jumbo, 75c.

A. belladonna minor. White throat, later flowering. 60c.

A. belladonna, var. Ethel. This, our seedling, is probably only a good clon of the var. "rosea." Dark rose, with white throat which turns rose. Late. Very beautiful. \$2.00.

Clivia. Altho easy to grow and to flower by the amateur, they will always be classed with the aristocrats of flowering bulbs, because the flowers easily place them there. They increase so slowly by division that the chief method must be thru the freely produced seeds. But *Clivia* requires at least five years and usually seven, to flower from seeds. This time involves expense. They can never become very cheap.

Clivias have evergreen, strap like foliage somewhat resembling that of *Hippeastrums*.

The flowers are produced in umbels of 10 to 25, in rich and exquisite tones of orange, in March and April. When not in flower the deep rich green foliage and later the red fruits are most ornamental.

Culture. They are usually grown in pots, even in the south, as more perfect foliage is thus possible, and when in flower one wants them in the house. We grow them in a lath house, lath spaced ½" apart and in garden under Avocado (evergreen) trees. They must have shade with only a few flecks of sunshine, but plenty of light and air.

Clivias must never be dried off or allowed to lose their foliage. Keep them well supplied with water after flowering, all summer and fall. Liquid fertilizer occasionally helps. When growth ceases in late fall rest them by giving less water. But keep moist enough to prevent wilting of foliage. At this time they should have a cool room with temperatures from above 32° to not much over 40°. Pots should be 8" for a small plant up to 12"



**CLIVIA, RECENTLY RECEIVED,
BUDDED PLANT**

for larger. Drainage must be perfect. Potting soil as described under "General Culture Directions." pH 7 is about right.

Please note. One cannot guarantee a *Clivia* to flower the first year after moving; they often do. The only sure way to have one that will flower in 1944 is to add 75c to the price of the plant ordered and ask us to send the plant when budded. The extra cost of labor to pack, packing material and postage for a budded plant is now about that much. Do not order budded plants of the \$1.00 size "miniata" or the \$2.50 size of miniata hybrids."

***Clivia miniata*.** Wide open flowers of soft yellow orange. Flower earliest, late Dec. to Mar 1. Hardest and easiest to grow. Blooming size, \$1.00. Large, \$2.00. The latter is more sure to flower the first year.

***C. miniata* hybrids.** Similar to the species "miniata" in foliage, hardness, wide open flowers, etc., but there is some variation in color and form of flower. Most of them are in light orange tones. A few are dark and a few have a white throat. Do not express your color preference, for any *Clivia* hybrids as we can't tell the color from the plant. **Special Prices:** Small plants that should bloom in one or two years, \$1.00. Small blooming size, \$2.50. Med. \$3.00. Large, \$3.50.

***C. nobilis* hybrids.** These are the finest and most rare of the hybrids. There probably is no large stock anywhere in America at present. Foliage broad with rounded apex. The large flowers range from light orange to red-orange. Large, \$10.00. In bud, March delivery, \$12.00.

Cyrtanthus are closely related to *Zephyranthes*. Bulbs and plants are about the same size but the flowers are long and tubular. Their most vigorous growth and flowering is in the winter tho a few flowers are produced thru a large part of the year. They may become semi-dormant in mid-summer when hot but should not be dried off much. They like rich soil and respond to barn-yard fertilizer.

***Crytanthus augustifolius*.** Orange red flowers. 50c.

***C. lutescens*.** Bright yellow tubular flowers. 35c.

***C. mackenni*.** Clear ivory white flowers on a larger plant. 35c.

Daffodils

This name for all *Narcissi* has the authority of the British Royal Horticulture Society. They are universal garden favorites. They belong to the *Amaryllis* Family.

Culture. All Daffodils except the *Polyanthus Narcissus* are hardy both in the mild climate of the south as well as in the colder northern states. In the north especially it is best to plant the bulbs rather deep where the frost does not reach. Six inches is about right. Smaller bulbs like Jonquils may go more shallow and be mulched. In California too and all the south there is an advantage in deep planting. We plant the Trumpets at least 4" deep. Plant September to November. Poeticus very early. All do well in pots.

Sandy loam is the best soil, but any good rich garden soil will do. The addition of thoroughly decayed manure is a help. Use no fresh manure. The addition of lime to the soil is good, and necessary if leaf mould is used, as they need a mildly alkaline or neutral soil.

Daffodil Stocks in America are dwindling because we have never produced enough here to supply our requirements. Not only are our European sources almost wholly cut off but the conditions of war, (lack of labor, etc.) make domestic production difficult.

Last year we reset most of our own field under the supervision of an inexperienced employee. As a result, some sorts were mixed and we have been obliged to withdraw them. The following varieties will be reasonably true to name. Daffodils are really scarce this year and one of our competitors wisely advises his customers to "Plant the best and forget the rest." The best, of course, is **King Alfred**.

Please note: At the following prices per bulb or per dozen, the bulbs are

mailed postpaid. If the 100 rate states, "f.o.b.", the bulbs are shipped by express and you pay the cost of transportation when received.

Trumpet Daffodils

King Alfred. Large, deep golden yellow with beautifully frilled trumpet. The favorite of all low priced daffodils. In two sizes of round bulbs. Both bloom well. Size No. 1, 20c ea. \$1.75 doz. No. 2, 15c ea., \$1.25 doz. Per 100, \$10.00 and \$7.50 f.o.b.

Incomparabilis Daffodils

Helios. Extra early. Large yellow flower with orange yellow crown. 25c ea. \$2.00 doz.

Homespun. Soft yellow petals, richly colored crown. 10c ea. 65c doz. \$5.00 per 100.

Sir Watkin. Petals and trumpet pure yellow. 10c ea. 85c. doz. \$6.00 per 100 f.o.b.

Barri Daffodils

Barri Conspicuous. Perianth yellow. Cup edged scarlet. Best known Barri. 10c ea. 50c. doz Per 100 \$4.00.

Diana Kasner. Pure white petals and fluted yellow cup with blood red frill. Fine forcer in pots. 30c ea. \$2.75 doz.

Leedsii Daffodils

Crystal Queen. Pure white petals, crown, primrose fading white. Leader in this class. 10c ea. 85c doz.

Polyanthus Narcissus

The "cluster flowered." Hardy only in mild climates, but unequalled for pots in the house. Highly perfumed. May be grown in bowls of fiber or held up by pebbles in a dish of water.

Soliel d'Or. Petals pure deep golden yellow, cup brilliant orange. Makes brilliant effect in the garden here in Jan. Equally fine in the house and goes right on blooming even at 20°F. The most desirable in this group. Special price, 8c ea. 60c doz. \$4.75 per 100 postpaid. Larger size, same price, charges collect.

Mixed Varieties. Includes Paper White and others. 50c doz.

Poetaz Hybrids

Hybrids between the Polyanthus and Poet's Narcissus. Hardy and fine in pots or garden.

Aspasia. Pure white, yellow cup. Best in this color. 10c ea. 90c doz.

Orange Cup. Pale yellow, with deep orange cup. 10c ea. \$1.00 doz.

Jonquils

They look like small Trumpet Daffodils, with about three flowers on a stem. Exquisite. Very hardy and rapid multipliers. Fine for potting. Posses most alluring and distinctive fragrance.

Golden Scepter. A new Jonquil-Daffodil hybrid. Flowers 3" across. Late deep jonquil yellow. 25c ea.

Elisena longipetala. Rare Peruvian amaryllid. Bulb and plant much like Ismene, Hymenocallis calathina, and culture the same. The flowers are much prettier, being pure white with long petals. It may be grown in the north easily, like Ismene, by the Gladiolus method. \$4.00 ea.

Eucharis grandiflora. Pure white. Exquisite beauty and fragrance. Evergreen. Difficult to grow and still more, to flower. For pots only, in sandy loam, rotted cow manure, leaf mould or peat. Add a little bone meal. pH should be about 6 or 6.5. If above that add more peat. Full sun in winter, shade in summer. Minimum temperature 50°. \$1.50.

Haemanthus. This south African genus of the Amaryllis Family is rare in

cultivation, therefore unusual. They are hardy only in almost frost free climates like So. California and Florida, but are rare pot plants in the north. The soil must be well drained and should be composed of a mixture of loam, leaf mould and peat, and plenty of sand. Include some coarse sand. The entire mixture should feel gritty. When in vigorous growth, the plants can use weak manure water or light, successive mulchings of manure. The two species listed here are very pretty in foliage and flower and quite unusual. In our spring catalogs we list *H. Katherinae* and *H. multiflorus* which are equally rare and unusual and most gorgeous in beauty.

H. coccineus. Blood Lily. The flattish bulb sends up its red-mottled flower scape in Sept., topped by an umbel of many closely spaced, red flowers, 4" across. Later two wide leaves appear and lie flat on the ground. These die in late spring and the plant should then be dried off until late Aug. Easy in pots in north. Bulbs seldom flower the first year if planted after Sept 1. Probably 25% shade is best, or full sun. \$1.00 ea. Larger bulbs, \$1.50 and \$2.00.

H. puniceus. (Formerly listed in error as *H. Lindenii*). Smaller, evergreen plant that makes a desirable pot plant of easy culture. Small umbel of scarlet flowers, on a mottled 12" stem, followed by red fruits. Flowers in spring as a pot plant. Delivery any time. \$2.75 ea.

Hemerocallis. Daylily. formerly placed in the Lily Family but recent botanical writers place them in the Amaryllis Family, where they evidently belong. The flowers range in color from dark bronzy red, thru pastel tones of pink to orange and yellow. They are born on a branching scape well above the foliage.

The Greek name, meaning, "beautiful for a day," refers to an individual flower. But these are so freely produced, thru a long period that "beautiful every day" would be more apt, as a collection of several sorts show masses of flowers throughout the spring, summer and fall and here we often have some winter flowers. The modern sobriquet of "The Perennial Supreme" is well deserved.

Culture. While their beauty is their greatest recommendation, their easy culture and hardiness adds to their desirability. They will succeed where any plant will succeed. I have known abandoned plants here, where we have arid, hot summer, to persist for years. But that must not be their fate. They grow well in full sun. Slight shade is even better. If given constant moisture about their roots, preserving this and coolness of the earth with good mulch, the plants are ideally situated and respond with generosity. They are hardy even in severe winters in the north. They are fibrous rooted, not bulbs, and must be planted at once when received. Also they can be moved any-time, it is better to ship from late fall to early spring, which we do.

In these war times, when it is difficult to get labor for maintenance of extensive gardens and landscaping, one solution is to plant Daylilies extensively. They are an almost perfect border or landscape plant, never have to be dug and replanted. All that you must do for them is, keep the weeds down and water. They will even choke out most of the weeds. A heavy leafy mulch helps every way.

In Daylilies, the sepals are colored and petal-like and are an essential part of the floral display.

Hemerocallis calypso. Large, fragrant lemon yellow flowers, June to Aug. 3½ ft. tall. 30c. \$2.50 doz.

H. Crown Prince. Similar to Mikado. June to Aug. Special. 20c. \$1.75 doz.

H. Dauntless. Pale cadmium yellow, greenish throat and delicate fulvous red in center of petals. 2½ ft. June-Aug. A standard for high quality. \$1.25.

H. Florham. Still popular old hybrid. Large, golden yellow flowers. May-July. 50c.

H. Geo. Yeld. Very large flower on 4 ft. stem. Blend of buff, apricot, orange and terra-cotta. 75c.

H. Gold Dust. Small early. Empire yellow. 50c.

H. Kwanso. The Double Orange Daylily. Red and orange. 20c. Special, 3 for 50c. or 8 for \$1.00. \$1.25 doz.

- H. Linda. A lovely Daylily. Petals, ruffled golden yellow flecked with cinnamon, with a rose zone. The sepals are lighter, pure yellow. \$2.00.
 H. Margaret Perry. Brilliant orange-scarlet. 4 ft. July-Aug. 35c.
 H. Mikado. Orange with mahogany-red zone. A favorite. 3 ft. May-July. 50c.
 H. Radiant. Rich orange. 50c.
 H. Rosalind. (Clon of H. fulva rosea.) Lovely rosy pink. \$5.00.
 H. Sibyl. Dark, purple-red petals with lighter sepals. \$4.00.
 H. Soudan. Lemon yellow. Broad wavy petals, 3 ft. June-July. 50c.
 H. Vesta. Deep orange, with gold sheen. May-July. 50c.
 H. Vulcan. Large, darkest maroon red. Rare. \$2.25.
 H. Wau-Bun. Large, apricot sprinkled with fulvous red. Top rank. \$1.00.

Hippeastrum or Amaryllis

Botanists have recently changed the name of *Amaryllis belladonna* to *Calliorea rosea* and of *Hippeastrum* back to the old and popular name of *Amaryllis*. To avoid confusion we must use both names.

Amaryllis are the most popular of all bulbs for growing in pots and well they deserve this popularity. The first bulb I ever owned (in 1898) was an *Amaryllis Johnsonii*. It made me a bulb grower and an *Amaryllis* specialist. *Amaryllis* will at least make you happy.

The value of an *Amaryllis* does not wholly depend on the size of the bulb. The quality of the flower produced is more important. Thus a bulb which will produce a high quality of flower and costs 75c to \$2.00 or more will not look any better than a cheap bulb from the dime store.

The perfect *Amaryllis* flower has broad rounded petals. This is the Leopoldi type. The flowers are not so large as to have droopy petals, 6" to 8" diameter is about right. The texture should be smooth and firm, not fluted, rough or frilled. The colors should be sprightly and in pleasing tones. There should be no green in throat and any throat markings usually detract from the beauty.

Naturally this ideal flower is rare. The rose, pink and white *Amaryllis* usually have a little green in the throat. Our strains do contain many that are wholly without green in throat or even white throat markings. So far as we know, there is no better strain offered by any grower. Every bulb is worth the price and many are very close to the ideal and hence worth much more.

White Amaryllis. Pure white is very rare in the Leopoldi type. They are beautiful, but have a weak constitution and are hard to grow. Most white *Amaryllis* offered have some pink markings. They are better growers and more dependable. For whites select Sibyl Houdyshel, "White Backgrounds" or the very hardy, near white Ambiguum hybrids.

Color Classes in Amaryllis are difficult to establish. A few rogues always escape. Thus you may find a few off colors in any class except Ambiguum hybrids which are always near white.

Named varieties. The newer sorts are more expensive than assorted seedlings because they can only be increased by offsets, a slow expensive process. Many seedlings are fully as good. Thus one often gets a bulb in the "White Backgrounds" or Ambiguum hybrids that is equal to "Sibyl Houdyshel." But a named variety has the advantage of being of exact color and quality.

Seed. We do not sell the seed of our best *Amaryllis* as we cannot produce enough for our own planting. No grower sells his best. We do not like to sell what we reject as second-class. The better way is to grow your own seed from our best bulbs. Make your own crosses on flowers you like best. To do this place pollen, a powdery substance from the outer stamens, on the central stigma when the prongs expand. When the resulting seed pods ripen and burst open they must be planted soon as old seed has deteriorated. Plant in pots or pans using ordinary potting soil. Cover lightly. A pane of glass on top will preserve moisture and often seed will come up with one watering. Seedlings are evergreen and will grow all winter in a warm room as well as summer. A few may flower when two years old.

Hippeastrum (Amaryllis) Hybrids. Assorted colors. Good types, from various

sources. 50c. ea. Three, \$1.25. \$4.50 doz. Large bulbs, 65c.

H. Ambiguum hybrids. This is a good strain of near white *Amaryllis* which we have raised by pollinating hybrid *Amaryllis* with *Ambiguum*. Then the best of the seedlings were pollinated with the best and purest whites. The resulting strain is quite hardy, good growers and have white flowers, with pink markings. \$1.00 ea. Three for \$2.50.

H. Hybrids. Select Strains. We have selected these from very best available strains. All are Leopoldi type with flowers of smooth texture, rounded petals and few faults. The colors are refined in countless tones from White Backgrounds, Pink, Scarlet to Red. Please order as "Select Strains, Assorted Colors, White Backgrounds, Pink, Scarlet or Red." Do not request self colors. Many are, but these are not marked. Prices, 2½" or over, 75c ea., 3 for \$2.00. 3"-3½" \$1.50. 3½ up, \$2.50.

H. Diener's Posthumous Hybrids. These are Diener's latest, grown from seed of his own crossings and planting. They are Equestre type and have longer and more pointed petals. We do not entirely agree with the claim for 16" flowers as 12" flowers is the largest we have seen. Since this strain often gives 5 or 6 flowers in an umbel one might get flowers 12" or over by removing all but three buds in an umbel. Colors are from nearly white to pink, scarlet and red. But no selection is possible as the bulbs are mixed. Large bulbs, \$1.50. Extra large, 3" or over, \$2.50

H. ambiguum. Has a tall scape with an umbel of 5 to 7 flowers, pure white with lines of pink. Very sweet fragrance. Rare. These Costa Rican natives were brought to California before 1875. \$3.00.

H. johnsonii. This old hybrid is one most often seen in southern gardens and is a favorite for potting. The rich deep red flowers, with broad, contrasting white band through the center of each petal, stand out in the garden. It is one of the hardiest, easiest to grow and most rapid in increase. 40c. Extra large, 50c. Jumbo bulbs, 60c.

H. Sibyl Houdyshel. Pure white with a narrow pink line on border, flushed and lined pink in throat. Very fragrant. Sturdy grower and propagator. Luther Burbank origination. One of the oldest American hybrids and as a distinct variety is rare and costly. But there are some in our Select Strain, White Backgrounds, that are larger and better in form. Price \$6.00 No small bulbs are for sale. No wholesale discount.

McCann's Double Amaryllis. As double as a rose, with often 20 or more petals. Shades of red or scarlet. This type is sometimes difficult to grow and your success is not guaranteed. Try very sandy soil. \$1.00 ea.

The following group belongs to the subgenus *Habranthus* and are sometimes listed as *Habranthus advenus*, *robustus*, etc.

H. advenum. Ox-blood Lily. This is a fall bloomer and winter grower. Small dark red flowers in an umbel of 7 or 8. Very hardy and will stand at least 12° below freezing. Probably safe to plant quite far up toward north. Plant 6" deep, full sun. It should be planted in every garden in the south and middle-south. On the coasts, north to Vancouver and N. Carolina. 25c ea. \$2.50 doz.

H. brachyandrum. Rare. Has a single-flowered umbel. Bright, deep, lavender pink. S., \$1.00. L., \$1.50.

H. robustum. Sometimes, in error, listed as *Zephyranthes*. Has one large lilac pink flower. 15c.

H. texanum. This name may not be correctly determined as we have two



**HIPPEASTRUM
SIBYL HOUDYSHEL**

types. One has broader foliage and the flowers and shape of bulb differ slightly. Small plant with yellow flowers in mid-summer. State whether you want the broad or narrow leafed type. Both for 45c. Price each 25c.

Hymenocallis. This genus includes the Spider Lilies and Ismene. The Ismene is deservedly one of our most popular bulbs but few know that new improved forms and hybrids have been produced. The almost ethereal beauty and the fragrance of Spider Lilies is known by few.

Culture. Hymenocallis are hardy in southern gardens where temperatures do not go lower than perhaps 15° above. Some will endure zero or colder but not the strictly tropical sorts. All do exceedingly well in pots or tubs. Both Spider Lilies and Ismene in the north may be grown outside in the summer and dug and stored in winter, the Gladiolus method. Glads themselves are tropical and no more suited for the north than these. The Ismene is even grown commercially in the north. Plant Ismene 4" deep, 6" apart. Smaller species not so deep.

Hymenocallis calathina. The Ismene or Peruvian Daffodil. Large white flowers, veined green with a daffodil-like cup. Very fragrant. Jumbo size, 35c. Large 25c. M. 15c.

H. calathina minor. A very tiny Ismene not one-fourth as large as the type. Of interest at least to collectors, and useful in small arrangements. This name is our own for a plant sent to us by a collector. 60c ea.

H. calathina "Advance." 2' tall. Larger, whiter and more flowers. \$1.00 each. The next four varieties are rare Ismene Hybrids.

H. festalis. H. calathina X Elisena longipetala hybrid. A more graceful form and pure white. Exquisite. \$2.00.

H. festalis Triumph. A further improvement, with immense flowers. \$3.00.

H. Olympia. The largest of all Ismenes. A creamy white. \$5.00 ea.

H. Sulphur Queen. H. calathina x amancaes. A yellow Ismene. \$1.50.

H. species No. 1. A small Spider Lily easy to grow in the south. In the north it is grown by the gladiolus method. Blooms more freely after large clumps are made. Plant close. Bulbs bloom easily in pots. 15c.

H. species No. 2. One of the best tropical species. Flowers large in a many flowered umbel. Fragrant and very beautiful. Will endure temperature of 20°, probably lower. Blooms well in pots or tubs. Can be dug and stored in north. 50c.

Leucojum aestivum. Quite hardy in north. Blooms early, often before snow is gone. Dainty white flowers, each petal tipped with a green dot. 10c. Per doz. 50c.

L. sp. unknown. Probably two species mixed. They have much larger bells and 5 to 7 in each umbel. Our best species. 20c ea. \$2.00 per doz.

Lycoris. Fall blooming amaryllid. Hardy well up into middle south. Radiata and aurea do not lose their foliage at 20°, and might stand lower without injury. L. squamigera and L. incarnata are quite hardy in the north.

Lycoris aurea. Golden Spider Lily. Very rare and one of nature's most gorgeous flowers. Deep gold. Plant about 4" deep. Prefers sandy soil. These came from Japan and are now almost unobtainable in America. We have a very few for \$2.50 ea.

L. incarnata. Flesh colored flowers with reddish markings. \$2.50.

L. radiata. Red Spider Lily. This is one of the south's very best bulbs. A bed of them in bloom will catch and hold the attention in any competition by other flowers. Large umbels on 12" stem of the most vivid coral red flowers with long undulated and reflexed petals and very long stamens. One of the easiest to grow. Hardy to North Carolina. 25c ea. Jumbo size 35c ea.

L. squamigera. The famous Amaryllis Halli. The flower umbel without foliage resembles Amaryllis belladonna. Color, lilac pink. Plant 4" deep and mulch in the north. Every northern garden should have them. \$1.00 ea. \$10.00 per doz.

Nerine. One of the most beautiful of the Amaryllids but few know them. There are, or were good stocks in Europe, but very few in America. They are au-

tumn flowering, beginning here with *N. filifolia* and *N. fothergilli* in September to October. *N. Bowdenii* in October to December. All our species, except one, proved hardy here when we had two weeks of temperatures down to 20° and ice 1" thick. With deeper planting and in a protected place they would probably survive 16°. *N. filifolia* is the most tender and probably 24° would be its limit.

Nerines like a sandy loam containing much leaf mould. We add peat as they prefer an acid soil. We plant in full sun. Most species except *N. filifolia* and *Bowdenii* (which grow all summer) will become dormant about June and should receive no water until August. *N. rosea crispa*, a *Filifolia* hybrid, may be treated either way.

They are ideal pot bulbs. Three bulbs may be planted in a 5" pot and remain undisturbed for five years. They resent being disturbed and if roots are lost they seldom flower the first year. They bloom and grow better when pot-bound.

Give plenty of water when growing and occasionally liquid manure. Get the best possible growth. When tops begin to yellow gradually reduce water. When dormant, they should remain in the full sun but receive no water.

Nerine Bowdenii. About 10 or more large rose pink flowers in an umbel 9" across on a 15"—18" stem or scape. One of the most choice and very easy to grow. This species is an exception in the culture requirements of *Nerines*. As it is almost evergreen it can be kept growing all summer. They may be dried off a little after flowering but need no long dormant period. Dry bulbs ready in Jan. 1.00 and \$1.50 ea. In Dec. to Jan., we can send selected bulbs with a bud showing for \$2.00 ea. These require extra care in wrapping, more expense, hence cost more.

***N. fothergilli* hybrids.** Assorted colors from the deep red of its seed parent to various shades of pink. \$1.50 ea.

N. filifolia. The smallest *Nerine*. Evergreen foliage with dainty pink flowers. Moved any time of the year. They must be crowded to flower well and as many as a dozen may be planted in a 5" pot. They increase very rapidly and hence a low price is possible. Four for 30c. 75c doz.

N. rosea crispa. A hybrid with flowers resembling *N. filifolia* but in a larger umbel on a scape 15" or more tall. 30c. Largest size, 50c.

Pancratium maritimum. Very fragrant white flowers, in shape like *Ismene* but pure snow white. Culture simple. Plant them 4" deep and watch them grow. Hardy in middle-south. 15c ea.



SPREKELIA FORMOSISSIMA

***Sprekelia formosissima* superba.** We found this variety (described and named by Hayward in 1938 *Herbertia*) in an old California Garden. The flowers are about twice as large as the common type, a lighter and more pleasing red color. The foliage is evergreen and the flowers are so freely produced thruout the year that it almost deserves the title of an ever-bloomer. We call this the *Orchid Amaryllis* because of the orchid-like shape. Jumbo bulbs, 75c; M., 50c; S., 35c.

Sternbergia lutea. A small yellow flowering, winter growing *Amaryllid*, often called "Fall Crocus." Culture like others of this type. Plant 3" deep. They are only a little short of winter hardy in the north and should succeed in protected situations in warmer sections of the middle-south as far north as Philadelphia. They must be ordered before Sept. 10 as on that date we expect to plant all on hand. Extra large Jumbo bulbs 50c. L. 35c. M. 25c.



TULBAGHIA VIOLACEAE

flowers, used for edgings in the flower or herb garden and add zest to salads, stews. 10c, 4 for 25c.

A. senescens. Erect strap shaped leaves. Deep lilac flowers in a dense globular umbel. Very fine bloomer. 20c ea. 3 for 50c.

A. sp. (prob. A. tuberosum). Oriental Garlic. A pretty Allium with white flowers. An ornament in the garden, indispensable in the herb garden. Leaves give a most delicious flavor to salads without the long-lasting high-powered after effect of garlic. In north, winter the plants in pots. They would probably grow in pots in the window all winter. Plants 25c each.

A. triquetrum. Much the finest white flowering allium, I think. The many large flowers in a large umbel are rather drooping. It does well in full sun like most alliums but even better in partial shade. Nicer in pots than A. Neapolitanum. 10c. 3 for 25c.

Brodiaea uniflora. Lovely porcelain blue flowers on a low plant. Usually grown in pots in the north but they are hardy in Ohio. Culture like Freesias. 3 for 20c, 45c doz.

Leucocoryne ixioids odorata. Glory of the Sun. New. Large, fragrant and very beautiful flowers in the early spring. Flowers are prized by florists and expensive. Cheaper to grow your

Tulbaghia violacea. A close relative of Agapanthus, but small enough to plant 3 in a 5" pot. Flowers are mauve to Chinese violet in an umbel on 24" stems. Begins soon after planting and blooms almost continuously through the year—winter and summer. Foliage has garlic odor when bruised. 35c, three for \$1.00.

The Alliae. This group is now placed in the Amaryllis family. Sandy loam is preferred. Do not add too much leaf mould and no peat as very acid soil is not so good. Plant about 2½" deep. The species Allium are onions and should be grown in full sun unless noted.

A. Sativum. Burbank's Elephant Garlic. This is the largest, juiciest and sweetest garlic and the easiest to peel. It often makes solid bulbs about 2" in diam. Others divide into very large cloves. Clusters of bulblets form at the base like Gladiolus. The flowers and plant are ornamental in the herb garden or border and give a delicious flavor to salads, etc. 15c.

A. Schoenoprasum. True Chives. Lovely little plants with lavender



BRODIAEA UNIFLORA

own. **Culture** like *Freezias*. 4 or 5 may be planted in a 5" pot. Blooming size, 2 for 15c. 75c doz.

A. triquetrum. Much the finest white flowering allium, I think. The many large flowers in a large umbel are rather drooping. It does well in full sun like most alliums but even better in partial shade. Nicer in pots than *A. Neapolitanum*. 10c. 3 for 25c.

Brodiaea uniflora. Lovely porcelain blue flowers on a low plant. Usually grown in pots in the north but they are hardy in Ohio. **Culture** like *Freesias*. 3 for 20c 45c doz.

Leucocoryne ixioides odorata. Glory of the Sun. New. Large, fragrant and very beautiful flowers in the early spring. Flowers are prized by florists and expensive. Cheaper to grow your own. **Culture** like *Freesias*. 4 or 5 may be planted in a 5" pot. Blooming size, 2 for 15c. 75 doz..

IRIS FAMILY. Iridaceae

The *Iris* is the type genus of this family. The following, from *Iris* and including *Moraea* belong to the *Iris* Family.

Iris. Tall Bearded *Iris* are garden favorites in all climates, north or south. They are easily moved in the fall. In fact, in the north they are usually planted in the fall. When planted in early fall, many but sometimes not all flower the following spring. Plant the rhizomes shallow, not over 1" below surface. The following very brief list are only a few of those we offer. If interested, send for our Economy *Iris* Price List which offers over 150 var. at from 8c ea. up.

Alta California. Yellow and golden bronze. 20c.

Buechley Giant. Massive, perfectly formed blue flowers. 25c.

Cecil Houdyshel. Plicata. White, feathered blue. More color than *Los Angeles* and hardy in north. 15c.

Cheerio. Rose red and red. 40c.

China Maid. Blend of pink, golden bronze and rosy lilac. Exquisite. 75c.

Eleanor Brooks. Phlox pink and yellow plicata. Small and lovely. 15c.

Golden Cataract. Deep golden yellow flowers. Here they flower several times. before summer and several times in the fall, often 7 months of flowers. 50c. Three for \$1.00

Happy Days. Largest, tallest, loveliest yellow. 30c.

Red Dominion. The reddest *Iris*. 25c.

Sierra Blue. A perfect *Iris*. Enormous blue flowers on 50" stem. 30c.

Special. One each of the above ten gorgeous *Iris* for \$2.85.

Dutch Iris. Dutch and Spanish *Iris* are about the same. They are bulbous. The flowers are not fragile like Bearded *Iris*, hence are very useful for cutting. This year we can offer only one named sort and a mixture.

Culture. Plant any time in the fall but as early as possible as bulbs planted after Nov. 15 may not succeed. Planting and culture like Glads. Full sun or slight shade. Hardy in north.

Yellow Queen. Tall deep golden yellow. 3 for 20c. 65c doz.

Mixed. Assorted colors. 65c doz.

Gladiolus

Culture. Glads planted Nov. 15 to Mar. 1 in Southern California and thruout the south (a little later in Northern California and early as possible in spring in the east) are reasonably sure to escape the attack of thrips. But Glad bulbs must be early dug or they will not start early or bloom early. Our Glad bulbs are especially grown for this purpose, matured early and dug in August. But if you plant recently dug bulbs you will gain nothing; they will continue their rest of three months before starting.

Thrips are very small insects that suck the juices from the plant. They cause the flowers to wither or appear burned, and appear only after weather becomes warm.

To avoid the damage they do, three measures are effective: Plant early; Plant clean, treated bulbs; keep them always wet by overhead sprinkling. Gladiolus that are sprinkled one-half hour every evening by a continuous spray will seldom show thrips damage at any time of year.

Treating bulbs. Mix 4 teaspoonful of Lysol in one gallon of water. Soak the bulbs 6 hours in this solution. It may be used several times but not after standing over one week. This is an acid solution and encourages root growth instead of delaying it. Do not treat bulbs bought from us. We treat before selling.

Plant 4" deep; small 3"; bulblets 2". Twice their diameter apart. We plant two rows, staggered in a 4" wide furrow. Rows about 20" apart. Alkaline soils produce poor Glads. Soil should be neutral to mildly acid. Leaf mould or peat added is useful. Peat causes soil to dry out more rapidly and imported peat is hard to get. Domestic peat is often harmful because alkaline. Use no fresh manure. Top mulch of leaf mould or imported peat is fine.

Keep Glads growing with plenty of water and best culture for at least two months after flowering. Longer is better for this is the period when new bulbs for next season are developing. It is best to dig bulbs in the south, and necessary in the north.

Fertilizers. Use only Superphosphate, a small handful to 6' of row, in furrows on both sides, after plants are about 1' high. Apply about once a month. Try a short space first. If it burns, use less.

Explanation. In this list L. means large, 1¼" diam or over. M. means medium, ¾" to 1¼". S. means small bulbs, blooming size. If watered very freely small bulbs produce good spikes. We have seen ½" Los Angeles bulbs make plants 4 ft. high by daily sprinkling. Large bulbs bloom earlier and throw more spikes. Prices are for one bulb. A dozen, all of one variety, costs ten times the price of one, unless otherwise stated. Not less than 6, will be sold at dozen rates. 100 bulbs of one sort are sold at 70 times the cost of one, unless quantity prices are otherwise stated.

California customers must add 2½% sales tax to these prices.

Orders for Glads will be filled in Nov. or early Dec. in time to plant for earliest spring flowers. We suggest that you order at once as we fill them in rotation. Remit with order as we cannot notify you to remit when ready.

Substitution. When we are sold out of one of the varieties ordered we usually substitute a variety as nearly like it as possible, giving equal or greater value. If this does not meet your approval please say, "Do not substitute." Be liberal this year, and allow substitution if necessary. It's hard to buy any from other growers.

New varieties. We are listing a few of the very best new sorts this fall. Try them for a change.

Annie Laurie. Beautifully ruffled, rose pink. L. 5c. 50c doz.

Ave Maria. Early, tall, large flowered blue. L. 5c. 50c doz.

Bagdad. Large, smoky, old-rose. Lovely. L. 5c. 50c doz.

Betty Nuthall. Favorite orange pink. L. 5c. 50c doz.

Capehart. New. Light salmon rose, Large flowers, tall spike. Exhibition quality. L. 20c ea. \$2.00 doz.

Debonaire. La France pink and shrimp pink, cream throat. 10c.

Dr. F. E. Bennett. Flame red. L. 5c. 50c doz.

Dr. Moody. Best lavender pink. L. 7c. 65c. doz.

Ethel Cave Cole. Very fine, new pink that sold last year for 75c ea. Many flowers open on spike. Exhibition quality. 30c ea.

Gate of Heaven. Ruffled, deep yellow. L. 6c. 60c. doz.

Golden Dream. Favorite, tall deep yellow. L. 5c. 50c doz.

La Paloma. Early, bittersweet orange. L. 5c. 50c. doz.

Lavender Delight. Delightful and unusual, but rose purple. 7c. 70c. doz.

La Verne. Tall, cream flushed pink, purple throat. 5c. 50c doz.

Los Angeles. Orange pink tone. Produces the most flowers of any. Best winter grower and bloomer. Plant 6" apart, give extra water. L. 5c. 50c. doz.

Maid of Orleans. Extra good, pure white. L. 6c.

Margaret Beaton. Large white, with red throat. New and very popular. 10c. \$1 00 doz.

Margaret Fulton. Coral pink to rose doree. L. 8c. 75c doz.

Minuet. Favorite lavender. L. 6c. 60c. doz.

Mrs. Leon Douglas. Tall, large, geranium pink. Plant deep. L. 6c. 60c. doz.

Myrna. Fine new ruffled cream. L. 30c ea.

Pelegrina. Deep violet blue. Early. L. 5c. 50c doz.

Pfitzer's Triumph. Very large salmon red. L. 6c. 60c doz.

Picardy. Tall, extra large. Shrimp pink. The most popular and the oftenest seen. L. 5c. 50c doz.

Radiant Orange. Our largest, best orange. L. 6c. 60c doz.

Rima. Light lilac pink. One of the best new glads. 8c. 80c doz.

Shirley Temple. Large ruffled cream. New, exhibition quality. 7c. 70c doz.

Souvenir. Small, golden yellow flowers in a graceful spike. Fine cut flower. 5c. 50c doz.

Star of Bethlehem. Large pure white on tall stem. A vigorous grower. L. 6c. 60c doz.

The Orchid. Individual florets resemble cataleya orchids in form and color and are useful for corsages. L. 7c. 65c doz.

Virginia. The loveliest red. 5c. 50c doz.

Wasaga. Flowers are apricot pink. Close relative of Picardy. 5c. 50c doz.

Mixed varieties. Many sorts are included in this mixture that have come up voluntarily in old fields, have lost the labels or of which there is a surplus. It is not a balanced mixture of everything but good sorts only are included. L. Bulbs 1" to over 1½". 50c doz. \$2.00 per 100. Bulbs ½"—1", 50 for 60c. 100 for \$1.00.

Baby Gladiolus

Most of our bulbs are priced at about the same old prices. Some are actually reduced. But Baby Glads are a sad story. Lack of labor at a crucial time prevented early planting and our crop is almost a failure. To buy them, we must pay nearly double.

We have a very few only of the following. The prices attached are per single bulb and there is no quantity reduction. Calif. **Peach Blossom**, pink 6c. **The Bride**, pure white, 15c. **Winter Fairy**, new large, salmon pink, 35c. Order early.

Culture. About the same as Glads. In the south they must be planted in early as they grow in the winter. A cool room is necessary if potted.

Watsonia

Close relative of the Gladiolus but winter growing and earlier in bloom. They grow as tall or taller. The flowers are smaller but in very lovely spikes useful for cutting. The colors are varied in most pleasing tones and bloom early if planted early. Better even the second and third years. Easy to have them for Decoration Day or before in So. Calif. In most cases we have discarded names and substituted the name of their color.

Culture. About the same as Glads. In the south they must be planted in early fall (September best) as the bulbs sprout early. Hardy at Washington, D. C.,

and probably in all climates where temperatures do not go below zero, if planted in a well protected place, 5" or 6" deep and well mulched. I believe they might be grown in warmer sections of the north if planted deeper than frost penetration, in a well protected place and well mulched. But you must obtain bulbs in fall, if you wish to try spring planting, and store cool. We can't hold them back.

Burbank's Lavender. Large lilac flowers. 8c. 75c doz. Per 100, \$6.00.

Ed Sturtevant. Grenadine or light orange scarlet. 8c. ea. 75c doz.

Giant Lavender. Lavender, a much misused color name is near to blue. This flower is light rosolane purple (orchid). The most magnificent and stately of all. Up to 8' tall. Large flowers. 15c ea. \$1.50.

Grenadine Pink. A little mixed. As is, 10c ea.

Lillian Benner. A fine purple variety. 10c ea. \$1.00.

Liseran Purple. Another "orchid" tone. 8c ea. 75c doz.

Rose Pink. Contains rogues. As is, 10c ea.

Rosolane Purple. "Orchid." 8c ea. 75c doz.

Scarlet. 8c ea.

Marginata. A species uniquely different. Very tall, slender, straight spikes with small flowers surrounding the stem for as much as upper 3'. Many lavender tones. Fine in flower arrangements. 10c ea. \$1.00 doz. \$7.50 per 100.

White. Its pure white flowers make it the favorite *Watsonia* of many. 6c ea. 60c doz.

Assorted Colors. Several colors included in a mixture. 6c ea. 60c. doz. Per 100, \$3.75.

Freesia

Freesias combine delicious fragrance with exquisite beauty. They are indispensable in the outside garden, or the window garden, and for cutting.

Culture. They are not hardy except in mild southern climates. Do not plant outside where temperatures go under about 26°. Plant outdoors early, before October if possible, though they do well when planted as late as November 30. But late planted bulbs will grow short stems and smaller flowers. Plant 18 to the foot, or 12 in a single row. Cover two inches. Rich sandy loam is the best soil but they do very well in heavy soil. Give full sun exposure.

Tritonia, *Ixia*, *Sparaxis*, *Streptanthera*, *Babiana* and *Freesia* are closely related genera. The culture is the same for all of them. All do well in pots in a sunny window of a cool room or outside garden in south.

No spring flowering bulbs are more satisfactory in pots or window boxes inside. No incense, no fragrance nor beauty can be had for so little expense or trouble. Plant 2" apart in pots or boxes. Place at once in the sunniest window in a cool room. Few winter flowering bulbs like hot rooms. Do not water heavily until up. Large bulbs started early often bloom by Christmas or soon after. We offer forcing size bulbs, ½" to ⅝" diam.

Apothoe. Large flowers opening mauve lilac and turning to carmine pink. Tall. 45c doz. \$2.50 per 100.

Golden Daffodil. The most popular *Freesia* and the very best for growing in pots. Deep golden yellow. 45c doz. \$2.50 per 100.

Orchidea. Soft pearly mauve with yellow throat. Tall, strong stem with 5 extra large flowers open at one time. New. 7c ea. 60c doz. \$3.00 per 100.

Pink Supreme. The supreme pink. 45c doz. \$2.50 per 100.

Purity Superflora. Improved Purity. Earliest best white for forcing in pots or in garden. The most fragrant. 45c doz. \$2.50 per 100.

Penserosa. Enormous flowers on tall stems. Soft pink with carmine throat and markings. New. 45c doz. \$2.50 per 100.

Sunset. Vivid apricot orange. Very fine. 45c doz. \$2.50 per 100.

Freesia Special. Assorted colors. White may be omitted if you request it. 40 for \$1.00.

Sparaxis

Intermediate between *Freesias* and *Ixias*. They are the most vividly colored of spring flowering bulbs. Large flowers on an 8" to 12" stem. **Culture.** like *Freesias*. Fine also in pots. They are more hardy than *Freesias* and can be grown in colder sections. Plant in full sun exposure.

Dutch Hybrid Sparaxis. Assorted colors, only, white, pink to red in various shades. Lower price. 3 for 15c. 35c doz. \$2.00 per 100.

Houdyshel Hybrid Sparaxis. We have grown and selected seedlings for several years and now have a strain that is more colorful than the original Dutch varieties. These contain new tones of pink, light yellow and even a very few that approach blue. Of course the most unusual colors are from 1 to 5 in a 100. 6 bulbs for 35c. 50c doz. \$2.75 per 100. Try *Sparaxis* in pots like *Freesias*. Sunny window, cool room not over 60° to 70° daytime. Outside gardens in the south only. Pay a little more and plant *Houdyshel Hybrids*.

Bloem Erf Hybrids. These are *Sparaxis-Streptanthera* hybrids. Taller plants and larger flowers than the pure *Sparaxis*. They are fine outdoors in the south or in pots. Here is a much reduced price, non-inflationary. 3 for 15c. 35 doz. \$2.25, 100.

Tritonias

Tritonia. Red. This is an unknown species or hybrid but the finest we have grown. 3 for 15c. 50c doz.

Tritonia liniata. This interesting species grows 18" tall and produces a spike of white flowers crossed by grey lines, hence "lineata." Very unusual 3 for 15c. 45c doz.

Babiana hybrids. These are almost all deep blue but now and then a red one. *Babianas* are smaller than *Freesias* but are fine in pots or southern gardens. 3 for 15c. 50c. doz.

Marica gracilis. Walking Iris or Apostle Plant. Beautiful but fugitive 2" flowers of white and blue with yellow and brown markings in center. Sword shaped leaves are very ornamental. A very nice pot plant in north and quite hardy in south. Very oddly, the flowers are followed by a small plant. The leaflike stem bends over and plants take root, thus "walking" away from mother plant. Requires nearly full shade, plenty of water. Hardy only in far south. The usual price is 50c to \$1.00. Special, 40c ea.

Moraea

The *Moraea* Tribe includes *Moraea*, *Dietes* and *Homeria*. None are hardy in the north but make very nice pot plants. *Dietes* can be grown in pots or tubs in the garden in summer and wintered in light basement, soil not too dry.

They are evergreen. *Moraeas* should be planted in the fall, 3" deep, 6" apart. They are quite hardy and easy in south but must be grown in pots in north. The following species can be stored in a cool cellar and planted very early in spring.

Moraea polystachya. Two foot plant covered with myriads of loveliest flowers that look like butterflies. Petals are mauve, penciled with violet and have a bright yellow signal blotch or eye. Blooms 6 weeks after planting and continues 3 or 4 months. A most desirable new bulb. L. 10c. 75c doz.6.50 per 100. Smaller blooming size bulbs 50c doz.

Dietes. This genus only recently has been removed from *Moraea* and given a new generic name. *Dietes* differ from *Moraea* in having a rhizome, similar to the Bearded Iris, and sword-like leaves. Flowers are very much like those of *Moraea*, borne on long wiry stems thruout summer into winter. **Culture** like *Iris*.

Dietes catanulata. Low growing species with waxy white flowers on a tall, perennial stem. 50c ea.

D. iridioides. White with yellow and blue markings. 25c ea.

D. iridioides Johnsonii. Flowers are about twice the diameter of the type variety above. Plant more robust. True variety. 50c.

D. Oakhurst Hybrids. New hybrids that soon make large clumps that are very ornamental in the garden. Flowers freely in summer with a few most of the time in winter. 2" flowers on 4' stems. 75c.

LILY FAMILY. Liliaceae

The type species is *Lilium*, or true Lily. Many call *Crinum*s, *Callas*, *Cannas* or any bulbs, "Lilies," but this is an error.

The Lily situation is most unsatisfactory because of the war. Many of our Lilies were grown in Japan, Bermuda, France, etc. American growers, because of lack of labor, have in many cases been unable to take care of their stock or to dig bulbs. We offer only the one true *Lilium* but several other genera of the Lily Family. Among these, we must omit *Hyacinths* and *Tulips*. *Tulips* are so very high in wholesale cost that we have lost money on them for two years. In fact, we only handled them on a "good will" basis. We are growing our own for 1944. We are omitting also *Gloriosas* from our Fall Catalog but will list it in our Spring Catalog, before planting time. All the following belong to *Lilaceae* ending with *Veltheimia*.

Lilium regale. Large fragrant, white flowers, tinted pink with cream throat. This is one of the hardiest and is easy to grow. It increases in size and number every year and becomes permanently established in the garden. It belongs in the perennial border along with *Daylilies*, *Shasta Daises*, shrubs, etc. They prefer mildly acid soil and the addition of leaf mould to your soil will give improved results. Mulch the ground or plant among shrubs or other plants that shades the soil surface but allows the plant to rise into the sunlight. Keep their feet cool and their heads warm. Small bulbs that flower well and become large the first year, 15c ea. 7 for \$1.00. Large, over 2" diam. 30c ea., 3 for 80c.

Colchicum. They arouse much interest because they may be laid on a table, without soil or water, and will flower thus.

Plant in a border or rocky before Sept. 10. if possible. They will flower in storage in spite of us so please order very early in Aug., if possible. They are recommended for full sun or half shade. Here, we think our full sun is too "full" and prefer slight shade. Keep them dry when dormant. They may be grown in pots.

Owing to their habit of flowering before foliage appears they look nicer among low plants and we suggest *Sedums*. Each bulb usually produces several spikes. M. 30c. L. 40c Extra jumbo bulbs 50c. Small *Sedum* Clump. 15c.

Muscari. Grape *Hyacinths*. var. **Heavenly Blue** or **Assorted Blue** varieties. Racemes of closely placed, exquisite, tiny blue bells. Fine in pots or garden. Large, 7c ea., 60 doz.

Scillas are closely related to *Hyacinths*. *Scilla hispanica* looks so much like Roman *Hyacinths* that they are often confused with them. All are useful in the garden or in pots and for cutting. All are hardy in the north except *S. peruviana*.

Scilla hispanica (campanulata). Blue. This species requires half shade. 8c ea. 75c doz.

S. hispanica alba. White flowers 8c ea. 75 doz.

S. hispanica rosea. Pink flowers. 12c ea. \$1.00 doz.

S. hyacinthoides. One of the finest bulbs for the outside garden as it is perfectly winter hardy in north. It has a densely flowered raceme often 3 ft. or more in height. Plant in full sun. If early planted, in the south it will flower in late winter to spring. In the north about mid-summer. Flowers are very useful for cutting. The bulb is extremely hardy and a strong grower and will even recover when left out of the ground a year. Take my advice, plant it. Top size, 25c; M., 15c. \$2.35 and \$1.50 per doz

S. peruviana. The short scape is terminated by a many-flowered, broad and compact raceme. This is the only *Scilla* that is not hardy in the north but there it is a most useful and easily grown pot bulb. Grow it in a very cool room. It needs full sun exposure. Assorted blue tones, 35c. \$2.50 doz. White, 50c ea.

Camassia leichtlinii. Lavender blue to aconite blue. Hardy north or south. Close relative of *Scilla*, with flowers in a spreading raceme on a tall stem. Plant 4" deep, 4" apart in full sun or slight shade. 25c ea. \$2.25 per doz.

Ornithogalum are closely related to Hyacinths and Scillas. Horticulturally there are two groups, tender and hardy. The tender ones are nice subjects for pot culture in the north, and for the garden in mild southern climates. They may be stored over winter in the north and planted outside very early.

Ornithogalum arabicum. The showiest species. The round glossy black ovary in the center of the white flower is a beautiful contrast. Flowers in a compact raceme at top of stem giving the appearance of an umbel. Tender. Easy in pots. Jumbo bulbs 25c. L. 20c. M. 15c. S. 10. Use only large bulbs for potting.

O. caudatum. A familiar pot plant in the north which is commonly but erroneously called "Sea Onion." The foliage and flowers are pretty but not outstanding. L. 50c. Jumbo, 75c.

Lachenalias

Lachenalias, or Cape Cowslips, furnish bright colorful flowers from before Christmas to February and later. They are small plants, usually one or two leaves. Flower scape 6" to 12" tall, with 12 to 24 tubular flowers about 1" long. For early flowers start them early in September and in no case delay beyond late October to plant. Leaves and stems are sometimes gaily spotted and decorative. **Culture.** Easy outside in mild climates and force easily in pots in the house. Plant in full sun, 2" deep and 2" apart. Several can be planted in a pot at about 2½" apart. They may be grown outside or in flats and potted when in full bloom. When tops die, dig bulbs and store dry. They rot easily in the ground if moisture is received when dormant.

Lachenalia Ada Bryson. Flowers orange yellow, buds and ends of spikes reddish. Blooms late December. Leaves spotted reddish. Bright and attractive. 20c ea. \$2.00 per doz.

L. F. W. Burbridge. Flowers most pleasing. An unusual combination of red, yellow and chartreuse green tipped with maroon. Maroon spots on leaves and stem. Blooms for Christmas. 20c ea. \$2.00 per doz.

L. Rector of Cawston. Flowers scarlet, citron and green. Free blooming. Leaves spotted red. 15c ea. \$1.50 per doz. \$12.00 per 100.

One bulb ea. var., 50c.

Veltheimia

Veltheimia viridifolia. Neither a picture nor words can accurately portray the beauty of this plant. For foliage alone it is superb. The vivid glossy green leaves are wavy margined and form a nice rosette. In pots, or in the garden in So. Calif. and other mild climates, it is in bloom by Dec. 15 and continues for about three months as large bulbs send up two or more spikes. The tubular, drooping flowers are densely placed on a long raceme. The color is a deep rosy or purplish pink of ineffable tones not found in any other flowers.

Culture is very easy. It prefers a sandy soil to which peat or leaf mould has been added. In pots the drainage should be perfect. They must be ordered early as nothing holds them back. Best to order before Sept. 15 or Oct. 1.

Specially priced, 50c ea. \$6.00 per doz. Extra large bulbs—75c, \$1.00 and \$1.50

OXALIS FAMILY. Oxalidaceae

There are two types, the winter and the summer growing. The summer growing species are listed in our spring catalogs. The following are all winter

growers. These are the brightest and most vivid of winter flowers for a sunny window or in the garden in the south. They give a profusion of bloom over several months period. A bed looks like a carpet of solid pink, rose, white, yellow, etc. The flowers are large some over 1" diam.

Culture. Plant about 2" deep, 3" apart. Large bulbs may be farther apart and a little deeper. In pots, the smaller may go 3 to 6 in a 4" or 5" pot. Use good rich soil, although they will grow in any soil. Give full sun exposure as they open only in full sun and close at night. Order and plant early as they begin to sprout even in August. But they may be shipped even with long sprouts up to mid October.

Oxalis Bowiei. A large plant with bright rose red flowers. 3 bulbs to a 5" pot. 5c ea. 50c doz. \$3.75 per 100. Largest size 10c. ea.

O. cernua. Bermuda Buttercup. Deep golden yellow flowers. Very profuse. 3 for 10c. 35c doz. \$2.50 per 100. Largest size 10c ea.

O. Grand Duchess. Low growing plants, but give a profusion of very large flowers in three colors. The **Pink** and the **Lavender** varieties are 5c ea. 45c doz. \$3.00 per 100. **White** 7c ea. 60c doz. \$4.00 per 100.

O. hirta. One of the finest winter Oxalis, and most unusual as it makes a leafy stem that to some extent falls over and will trail down the sides of a pot. Nice for hanging baskets. The flowers are deep rosy red. Super jumbo bulbs, diam. 1" and up, the best blooming size for pots, 25c ea., \$2.00 doz., \$12.00 per 100. L. 15c ea., \$1.25 per doz., \$9.00 per 100. M. 10c ea., 85c doz., \$5.00 per 100. S. 5c ea., 40c doz., \$3.00 per 100. Smaller sizes are likely to flower under ideal conditions but otherwise not too sure.

Oxalis Special. The bulbs offered in this lot are assorted in size but some are small. They will all flower well. Some are accidentally mixed, others are surplus. Price 30 for \$1.00.

THE ORCHID FAMILY. Orchidaceae

Orchids are the most exquisite of flowers, but most of them require a greenhouse. The *Bletilla* is a terrestrial orchid of great beauty and easy to grow in the outside garden. Hardy everywhere, north or south. Culture easy. Plant in half shade, 3" deep in summer.

Bletilla hyacintha. Eight or more dainty orchids, 1" wide, on a 12" stem. True orchid color. Top size, 50c M. 35c. Blooming sizes, \$25.00 per 100.

B. hyacintha alba. Pure white form. 75c ea.

Epidendrum o'brienanum. This orchid has a large terminal cluster of brilliant red flowers, each in the typical orchid form. The flowers open 10 or more at once and are about 1¼" wide. The plant makes a large cluster of tall stems, 3 ft. or more. In nature they grow among grasses or weeds which support them. We can imitate that by growing among erect plants.

They need hot, nearly full sun exposure; an abundance of water in summer. They grow easily in the garden in the south where minimum temperatures are not below 27°.

They like a deep mulch of leaves, small branches, etc. This helps to support the stems, protects the roots when too cold, (ours easily recovered from a low of 20°) and maintains the needed constant moisture of soil.

We use soil of rich sandy loam and for a distance of nearly one foot, we add 50% peat (in volume) to the soil.

They grow easily in pots or baskets. Use 50% or more peat or leaf mould. Prices. Branch with roots attached 75c. Large clumps, up to \$10.00 in proportion to size.

Cymbidium Orchids are immensely popular in So. Calif. and wherever known. Their greatest fault is, they are hard to get at reasonably low prices. They are of easy culture, exquisite in beauty, of a wide range of colors and early varieties are in flower in Oct., the late ones in July.

The large 4" to 6" flowers are born on a stem often 4 ft. long, from 12 to 30 in number. Well established plants may give 4 or more stems and old clumps up to 35. The flower spikes remain in perfect condition for 8 to 12 weeks. When cut the flowers have unsurpassed lasting qualities and may be used many times in a corsage if kept in a refrigerator between times.

The flowers are of typical orchid form and in a wide range of colors. It is impossible to give accurate color descriptions of these as altho the species are fairly constant in color the hybrids are quite variable. You must consider our descriptions only as approximate and sometimes not even that.

Culture. Cymbidiums are terrestrial orchids from India and Burma where they grow in the moist atmosphere of mountains and foothills in perfectly drained situation. They are of the easiest culture. The shade of the ordinary lathe house, lath spaced 1" apart, 50% shade, is correct. The shade of trees, if it gives 50% filtered sunlight is excellent. They do best in a sandy soil to which at least an equal amount of fine rotted leaf mould has been added. In pots they may be grown in the same compost used for Begonias or they may be grown in orchid peat and leaf mould. If difficult to get just what you want, take equal parts of loamy sand and fine leaf mould. Wherever planted the underdrainage must be perfect. A soggy soil is very bad. They should be always moist, never too wet. Sprinkling the foliage is good in our too dry atmosphere. When well established give occasional light surface mulch of manure or manure water.

In the following list, the price attached is for a single division. They should flower in one or two years.

C. **Butterfly.** Yellow to buff with red lip. \$6.00.

C. **Doreen.** Greenish bronze, yellow lip spotted purple. \$6.00.

C. **Doris hybrid.** Variable. The parent has large tawny to russet flowers with purple spotted cream lip. \$6.00.

C. **Giganteum.** A robust grower. The lovely flowers are smaller than some but as they are the earliest to flower they have no competition. \$4.50.

C. **Hookerianum.** Beautiful shade of green that is lovely in a corsage. \$4.00

C. **Insigne.** Lavender purple and white. The plant is small and the most graceful of the Cymbidiums. Can be grown in relatively small pots. \$6.00.

C. **Moir.** Cream and yellow marked brown. \$5.00.

C. **Winter Cheer.** Bronze shaded rose. \$6.00.

THE CALLA LILY FAMILY. Araceae

This family contains the so-called Calla Lilies or Zantedeschia, Black Callas and other Aroids.

Culture. All Zantedeschias and Arum palaestinum are suitable for pot culture. A. palaestinum will start about September or later. Do not put this bulb into moist soil before that or it will rot. Zantedeschias—pink, yellow, spotted leaf and melanoleuca may be potted by about December 15. Don't rush them as too much water before they start to grow may rot them. They may be held back and started in early spring, here in late February. All do well in the garden in a moist semi-shaded cool place. They are not hardy in cold climates; dig in fall. The White Calla usually blooms in California in the garden in late winter. They may be planted in early fall in pots or garden.

It is an error to keep large White Callas growing continuously. If rested through summer you will be rewarded with flowers. A rest brings flowers when they start again, often twice or more in a year. The Baby Calla should not be allowed to lose its foliage. Callas as pot plants need some sun.

Zantedeschia aethiopica, var. Baby Calla. This is the smallest and whitest calla. Small enough for corsage. We send small bulbs as the large bulbs make larger flowers, approaching in size those of Godfrey. For tiny 1" flowers replant your small bulbs. 20c ea., 3 for 50c. \$1.50 per doz.

Z. aethiopica, var. Godfrey Calla. The best and most popular of dwarf Callas

before "Baby" was introduced. Being twice as large as "Baby" makes it a "medium" size. This is so much more appropriate in size, freer in blooming and more desirable in every way that we do not recommend the large type. 20c.

Z. aethiopica, unknown European variety. This variety is about the size of the ordinary large white calla, possibly not quite so tall. The flowers are exceedingly white and more open, larger and distinctly different in form. The plant is more inclined to remain evergreen and to flower in summer and is more free blooming in all seasons. \$1.00 ea.

Z. albo-maculata. Spotted leaf-calla. The prettiest foliage of all and worth growing for that alone. Endures sun best. Flowers, creamy white with dark throat. Large 15c, 20c and 25c.

Z. elliotiana. Pure golden yellow flowers. Requires more shade than others. 15c to 25c. All blooming size.

Z. melanoleuca. Black Throated Calla. New and rare Calla. Plant larger than Yellow Calla and spotted foliage even more decorative. The flower spathe is large, yellow with contrasting purple-black throat and widely flaring. Stock scarce, order early. M. \$1.00. L. \$1.50.

Z. rehmanni. Pink Calla. Color varies from rose pink to deep rosy red and purple. A number will show a great variety of shades as they fade into new ones. S. 25c. M. 50c. L. 75c. Jumbo \$1.00.

Arum palaestium. Black Calla or Solomon's Lily. Foliage and flower like callas. Really black. Plant 4" deep and not before September 1. If not kept perfectly dry until that time the bulbs rot. Flowers in February in pots or in the garden in the south. No bad odor. Best in half shade. L. 75c.

A. maculatum. Very much like *A. italicum* but has plain green leaves. Rare. \$1.00.

Dracunculus vulgaris. Gorgeous tropical foliage with large black-purple flowers with bad odor when first opened. Hardy in north if planted 8" to 12" deep and mulched. 50c. to \$1.50.

RANUNCULUS AND ANEMONES. Ranunculaceae

These have recently become among our most popular flowers. Their vivid colors, cheapness and the easy culture well fit them for a top rank in amateur gardens.

Ranunculus range in color from red, pink, white to yellow. There is no blue. If well grown and from a good strain the flowers are very double, in a variety of shades.

Anemones are red, pink, white and blue in a variety of tones, but no yellow. They should be grown with *Ranunculus* to make a complete color range. Our *Anemones* this year are mostly the single flowering De. Caen type altho there may be a few doubles and semi-doubles in the mixtures.

Culture of Anemones and Ranunculus is very easy if one conforms to their requirements. The soil should be rich. Sandy loam is better than heavy soil. Heavy soils may be made suitable with humus. The plants need constant moisture, and drying out or baking of the soil only once will result in less perfect flowers, and may be fatal. The beds should be well drained and never soggy. Too much water rots the bulbs before sprouting.

Plant 1" or 2" deep and 4" to 6" apart, depending on size. Do not soak the bulbs. When weather is dry and warm a slight cover of brush helps and also keeps birds away. A shade of cloth or lath is good. They like cool conditions and the greatest threat is a heat wave shortly after planting. Heat and moisture combined rot the bulbs. It is best to delay planting until weather is cool, but if hot weather follows, put up shade. One can gain a couple of weeks on the chances of hot weather by sprouting the bulbs before planting. Fold the bulbs in a wet burlap sack and lay in the cool shade of a tree. Plant before sprouts are over 1".

A very good comparison for the culture requirements of these bulbs is that

of Sweet Peas. You would not plant sweet pea seed in July or August, nor in September if it were hot or likely to be. Nor does the wise gardener soak his sweet pea seed. Sweet peas need cool weather, very rich deep soil, but no raw manure. The seed bed must be kept slightly moist, but well drained. The soil must never bake or have a crust formed. One must not overwater at first as constant soggy condition of the soil is sure to rot the Sweet Pea seed. You must protect the young plants from birds, cut worms, snails, etc.

Just substitute 'Ranunculus and Anemones' for "Sweet Peas" and you have their culture requirements.

In cool climate like that around San Francisco Bay the bulbs may be planted almost any time of year. In the north they may be planted as early in the spring as the ground may be worked. They are not hurt by temperatures considerably under 32°. We have had them keep on blooming and growing when our night temperatures reach 20°.

A north Texas customer tells us that she planted 100 of our Ranunculus in the fall. They came up but the temperature later dropped unexpectedly to a little below zero. About six plants survived and bloomed beautifully in early spring. Probably if the temperature had been no lower than 10° F. all would have survived. From all the reports I have gathered from customers, it appears to be perfectly safe to plant these outside anywhere if winter temperatures are unlikely to go below 10°. It is quite possible they would survive 0° F. or below if protected. A good protection would be a cloth or burlap covered frame south of wall, house or tree.

But in the cold northern climate, plant in late winter or early spring. Everyone, north or south, should grow a few in pots.

For Potting. Ranunculus and Anemones do well and bloom beautifully in pots in a sunny window or a greenhouse. They require a very cool room and a hot room will often result in failure to flower or even to grow well just as the same results may follow for Freesias, Lachenalias, Veltheimias and all bulbs that grow and flower in the winter in Calif. But our spring blooming bulbs like Amaryllis, Lilies, etc., like more warmth.

It is advisable to use the larger sizes for potting. A Jumbo bulb will make a large plant and give many flower spikes. It will nicely fill a 6" to 8" pot. Top size should have about 6" pot. No. 1 at least a 5" pot and No. 2 at least 4" pot. Larger pots are an advantage.

Don't fertilize before planting. Use light applications when 3" tall.

Use the regular potting soil advised and be sure of perfect drainage.

For outside planting, we advise size No. 3 for economy. However larger bulbs will produce specimen plants, with more flowers. They will also bloom a little earlier than No. 3 bulbs and are slightly easier to grow.

Prices Ranunculus and Anemones.

Size No. 3. 20c. doz. \$1.25 per 100. \$6.00 per 500. \$10.00 per 1000

Size No. 2 40c. doz. \$2.75 per 100. \$11.00 per 500. \$20.00 per 1000

Size No. 1 60c. doz. \$4.00 per 100. \$16.50 per 500. \$30.00 per 1000

Top size, Ranunculus only. 10c ea. 80c. doz. \$5.75 per 100. \$24.00 per 500. \$45. per 1000.

Jumbo size, Ranunculus only. 15c ea. \$1.00 doz. \$7.00 per 100.

Straight Colors. Size No. 3 only. Ranunculus in Red, Orange, Yellow, Pink and White and Anemones in Red. Price 30c doz. 50 for \$1.25. \$2.00 per 100. \$7.50 per 500. \$14.00 per 1000.

PLANTS

Bromeliads. We have formerly listed these in our Fall Catalog as well as Spring Catalog. We have about decided that spring is a more favorable time to move them as the plants should be entirely dormant in the winter. Therefore we offer here only one, *Billbergia nutans* which gives a gorgeous flower between late

Dec. and mid Feb. Billbergias are tropical and do well outside only in the warmer sections of the south. They are gorgeous pot plants in the north. Pot them in a mixture of sandy soil and leaf mould, equal parts. Price 50c. Plant with bud, delivered as soon as ready, \$1.00.

New Violet, Royal Robe. Large lustrous flowers of deepest violet-blue on long stems. Intensely fragrant, wide open flowers. You can grow these outside like any other violets or in pots in the house. They will be best suited in a temperature of about 50° F. They do not like heat, and do not bloom if much warmer. They grow well in any good garden soil, like plenty of moisture but should not be overwatered. Price 40c ea.

Shasta Daisy. New variety, **Esther Reed.** A full double flower with no hard center. Valuable as a florists flower. Hardy. Culture like Chrysanthemums. We deliver single leads when dormant from early winter to about Mar 1. 25c ea.

Mt. Shasta is claimed to be taller, larger and with a higher crest than **Esther Reed**. Price, 50c.

Marconi. The best Chiffon Daisy. Taller, larger flowers than the above. 50c.

Bulbs not listed in this Catalog. For **Crinums** see Spring 1943 Cat. They may be planted in the fall if desired. For other **Haemanthus** not listed here, **Tuberous Begonias**, **Gloxinias**, **Gloriosas** and other spring planted bulbs see our Spring 1944 Cat., out Jan. 15 For **Bearded Iris**, send for **Iris Price List**. Do not order bulbs from us that we do not list. We can only substitute.

We cannot tell you where you can buy **Liliums**, **Tulips** or **Hyacinths**. Watch the advertisements.

There is an acute bulb shortage this fall. We have a good stock of most bulbs listed but on a few items like **Anemones** and **Ranunculus** we have only one half our usual supply. You should order these early as we may sell out early. If you order late, we suggest you give permission to substitute other sizes, quantity prorated.

BUY MORE WAR BONDS

